

TWO NEW GENERA OF CEPHIDAE (HYMENOPTERA) FROM EASTERN ASIA

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Abstract Two new genera of Cephidae, Hymenoptera are described for two aberrant species of *Junus* Stephens from Eastern Asia: *Magnitarsijanus* gen. nov. and *Stigmatijanus* gen. nov. The type species of *Magnitarsijanus* is *Junus kashivorus* Yano et Sato, 1928 and the type species of *Stigmatijanus* is *Junus stigmaticalis* Maa, 1949. Two new combinations are proposed: *Magnitarsijanus kashivorus* (Yano et Sato, 1928) comb. nov., *Stigmatijanus stigmaticus* (Maa, 1949) comb. nov. *Magnitarsijanus kashivorus* (Yano et Sato, 1928) is a new record from China.

Key words Hymenoptera, Cephidae, new genera, new combination, Asia.

Cephidae is a small family in Hymenoptera and includes about 19 valid genera and 145 species. The family is mostly Holarctic and most genera and species are found in the temperate regions of Northern Hemisphere, though a few taxa have been recorded from tropical regions of Asia and even from Africa. The cephid fauna of E. Asia is quite rich as about one third of the known species and half the known genera of the family are endemic to the region. While preparing the synopsis of genera of Symphyta, two aberrant species in *Junus* Stephens caught our attention. It seems reasonable and necessary to erect two a new genus for each of them. Specimens examined in our research are deposited in Insect Collection of Central South Forestry University, Changsha, China.

Magnitarsijanus Wei, gen. nov.

Diagnosis. Body small and fair, not robust or slender (Fig. 1). Left mandible bidentate, with inner tooth weakly shouldered and as long as outer tooth (Fig. 2); right mandible tridentate; maxillary palp with 6th segment emerging from middle or near base of 5th, 3rd segment enlarged and as long as 2nd segment, 4th segment slender and 2 times longer than 6th segment (Fig. 3); labial palp 4 segmented, 1st segment longer than 2nd segment, 2nd segment more than 2 times length of 3rd segment, 4th segment broad, as long as 1st segment and 3 times length of 3rd segment (Fig. 4); clypeus evenly elevated, without middle carina, area between antennal sockets strongly elevated; distance between antennal sockets slightly narrower than distance between an antennal socket and inner margin of eye, and clearly shorter than distance between an antennal socket and a tentorial pit on same side; malar space broader than diameter of front ocellus; eyes medium sized, with inner margins parallel, shortest distance between eyes

broader than height of an eye; POL slightly narrower than OOL, OCL 3 times POL; occipital carina extending to upper part of hind orbit; head not strongly swollen behind eyes, 1.5 times broader than long, temple slightly shorter than eye and feebly narrowing backwards in dorsal view. Antenna filiform, 22–23 segmented and its length about 2.5 times head breadth, flagellum not distinctly swelling, scape slightly longer than broad, pedicel as long as broad, 3rd segment as long as 4th segment. Pronotum distinctly broader than long. Apical branch of inner apical spur of fore tibia about half length of main stem (Fig. 5); middle tibia with 1 preapical spur; hind tibia as long as hind tarsus, hind tibia with 1 preapical spur and 2 apical spurs, basitarsus distinctly enlarged and laterally compressed, as broad as apex of hind tibia and clearly longer than following 3 tarsomeres together (Fig. 6); claw short and broad with an acute basal lobe, inner tooth slightly longer and broader than outer tooth (Fig. 7). Cell C in forewing narrow, vein Sc absent, 1r joining stigma close to base, 2r joining stigma at middle; hind wing with cell Rs and M closed, cell Rs very small and about as long as broad. Abdomen strongly compressed laterally, 1st tergite not fused at middle, 2nd segment very short and high, almost 3 times higher than long (Fig. 8); cerci shorter than 1/4 length of sheath; ovipositor slightly longer than hind tibia, distinctly bent ventrally, sheath slightly shorter than basal plate (Fig. 9). Lancet simple with 2–3 apical annular sutures, serrulae subtruncate at apex, without fine tooth (Fig. 10).

Type species: *Junus kashivorus* Yano et Sato, 1928
Range. E. Asia: China, Japan.

Remarks. This new genus is close to *Junus* Stephens, 1829 and *Megajanus* Wei, 1999 but differs from them in the hind basitarsus distinctly enlarged and compressed, the hind tibia with only 1 preapical spur,

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Figs 2-10. *Magnitarsijanus kashivorus* (Yano et Sato, 1928). 2. Left mandible. 3. Maxillary palp. 4. Labial palp. 5. Inner tibial spur of foreleg. 6. Hind tibia and basitarsus. 7. Claw. 8. Second abdominal segment. 9. Sheath. 10. Middle serrulae.

the 3rd antennal segment as long as the 4th segment, cell Rs in hind wing small and about as long as broad. The new genus differs furthermore from *Janus* in sheath long and bent ventrally. The distinctly swelling and compressed hind basitarsus in the new genus is unique within the family Cephidae.

Etymology. From the Latin compound element *magni-*, meaning large, *tarsi-* meaning tarsus, and *janus*. Gender of the name is masculine.

Takeuchi (1938) had ever already pointed out that *Janus kashivorus* Yano et Sato is quite aberrant in the genus because of the hind tibia with 1 preapical spur, the third antennal segment as long as the fourth and the sheath almost as long as basal plate. Shinohara (1999) also noted that the hind basitarsus of the species is also very peculiar. In our opinion, the 3rd antennal segment as long as the 4th segment, the hind tibia with only 1 preapical spur, cell Rs in hind wing small and about as long as broad, and especially the unique hind basitarsus of *Janus kashivorus* Yano et Sato are enough to erect a new genus for the species.

Magnitarsijanus kashivorus (Yano et Sato, 1928)

comb. nov. New record to China (Figs. 1-10)

Janus kashivorus Yano et Sato, 1928. *Konbu*, 2: 210.

Janus kashivorus Shinohara, 1999. *Jm. J. Syst. Ent.*, 5: 73.

Distribution. China (Human); Japan.

Specimens examined. 2 ♀♀, Mt. Yangmingshan, Yongzhou, Hunan, 900-1 000 m, 25 Apr. 2004, WEI Mei Cai coll.; 1 ♀, Mt. Nan, Chengbu, Hunan, 1 500 m, 24 Apr. 2005, WEI Mei Cai coll.

Stigmatijanus **Wei, gen. nov.**

Diagnosis. Body small, somewhat robust (Fig. 11). Left mandible tridentate, with a distinct middle tooth, inner tooth not shouldered and as long as outer tooth (Fig. 12); right mandible tridentate; maxillary palp with 6th segment originating near the base of 5th segment, 3rd segment enlarged and slightly longer than 2nd segment, 4th segment slender and 2 times longer than 6th segment (similar to Fig. 3); labial palp 4 segmented, 1st segment much longer than 2nd segment, 2nd segment 2 times length of 3rd segment, 4th segment broad, distinctly longer than 1st segment and 3.5 times length of 3rd segment (Fig. 13); clypeus evenly elevated, without middle carina, area between antennal sockets distinctly elevated; distance between 2 antennal sockets slightly broader than distance between an antennal socket and inner margin of eye, and as long as distance between an antennal socket and a tentorial pit on same side; malar space as long as diameter of front ocellus; eyes medium sized, with inner margins parallel, shortest distance between eyes clearly broader than height of an eye; POL almost equal to OOL, OCL 2.5 times POL; occipital

carina extending to upper part of hind orbit; head broader than thorax, not strongly swollen behind eyes and 1.3 times broader than long, temple slightly shorter than eye and feebly narrowing backwards in dorsal view. Antenna filiform, 25-26 segmented and its length about 2.5 times head breadth, flagellum slightly swelling, scape distinctly longer than broad, pedicel clearly longer than broad, 3rd segment slightly longer than 4th segment. Pronotum slightly broader than long in dorsal view. Apical branch of inner apical spur of fore tibia almost as long as main stem of spur (Fig. 14); middle tibia with 1 preapical spur; hind tibia as long as hind tarsus, hind tibia with 2 preapical spurs and 2 apical spurs, basitarsus slender, not enlarged and compressed and clearly longer than following 3 tarsomeres together; claw short and broad with an acute basal lobe, inner tooth slightly longer and broader than outer tooth (Fig. 15). Cell C in forewing narrow, vein Sc absent, 1r close to 2r and both joining stigma at about middle; cells 1Rs and 2Rs very small, together slightly longer than half length of cell 1M, cell 2M slightly longer than broad (Fig. 16); hind wing with cell Rs and M closed, cell Rs small and slightly longer than broad. Abdomen strongly compressed laterally, 1st tergite not fused at middle, 2nd segment very short and high, almost 3 times higher than long; cerci about as long as 1/3 length of sheath; ovipositor shorter than hind tibia, distinctly bent ventrally, length

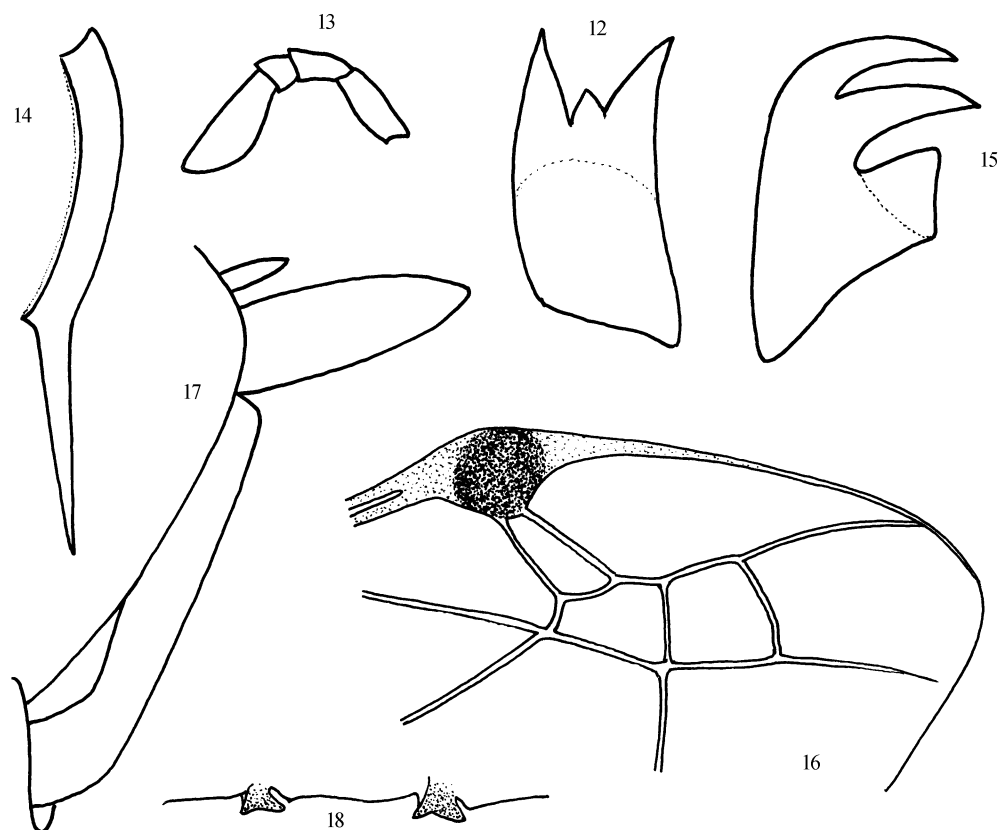
of sheath about 3/5 length of basal plate (Fig. 17). Lancet simple with 2-3 apical annular sutures, serrulae subtruncate at apex, without fine tooth (Fig. 18).

Type species: *Janus stigmatialis* Maa, 1949.

Range. China.

Etymology. The name refers to the much shortened and broadened stigma in the forewing. The gender is masculine.

Remarks. This new genus is close to *Janus* Stephens and *Jungicephus* Maa, 1949. It differs from *Jungicephus* Maa in the left mandible tridentate with a middle tooth and the outer tooth simple, pterostigma of forewing strongly shortened and broadened, veins 1r and 2r both originating from the stigma at the middle, cell 2R1 very narrow, cells 1Rs and 2Rs quite small, they together only slightly longer than half the length of cell 1M, the cell Rs in hind wing shorter than half length of cell M, the 4th segment about 2 times length of the 6th segment, POL equal to OOL, the ovipositor strongly bent ventrally and the body robust. It differs from *Janus* Stephens in the left mandible tridentate with a middle tooth and the inner tooth not shouldered, pterostigma of forewing strongly shortened and broadened, veins 1r entire, 1r and 2r both originating from the stigma at the middle, cell 2R1 very narrow, cells 1Rs and 2Rs quite small, together only slightly longer than half the length of cell 1M, the cell Rs in hind wing shorter than half length



Figs 12-18. *Stigmatjanus stigmatialis* (Maa, 1949). 12. Left mandible. 13. Labial palp. 14. Inner tibial spur of foreleg. 15. Claw. 16. Dorsal apical part of forewing. 17. Sheath. 18. Middle serrulae.

of cell M, the distance between antennal sockets greater than the distance between an antennal socket and the inner margin of eye, and as long as distance between an antennal socket and a tentorial pit on same side.

Stigmatijanus stigmaticus (Maa, 1949) **comb. nov.**
(Figs. 11-18)

Janus stigmatius Maa, 1949. *Chin. Journ. Zool.*, 3: 20.

Distribution. China (Shandong, Shanghai).

Specimen examined. 1 ♀, Mt. Mengshan, Linyi, Shandong, China, 29 May 2004, alt. 600-800 m, LIU Wei Xing cdl.



Fig. 1. *Magnitarsijanus kashivonus* (Yano & Sato, 1928), adult female. Fig. 11. *Stigmatijanus stigmaticus* (Maa, 1949), adult female.

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东亚茎蜂科二新属 (膜翅目)

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摘 要 描述了东亚膜翅目茎蜂科两新属: 大跗茎蜂属 *Magnitarsjanus* gen. nov. 和短痣茎蜂属 *Stigmatijanus* gen. nov., 前者分布于中国和日本, 后者分布于中国东部, 其模式种分别为 *Janus kashivonus* Yano et Sato, 1928 和 *Janus stigmatiaus* Maa, 1949. 建立了 2 个新组合: 红盾大跗茎蜂 *Magnitarsjanus kashivonus* (Yano et Sato, 1928) comb. nov. 和黄鳞短痣茎蜂 *Stigmatijanus stigmatiaus* (Maa, 1949) comb. nov., 其中红盾大跗茎蜂是中国新纪录种。

关键词 膜翅目, 茎蜂科, 新属, 新组合, 亚洲.

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